NORTH AMERICAN DRÄGER

PRODUCT BULLETIN

Product(s):	Narkomeds with ORCs
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Subject: Narkomed Low Flow Anesthesia Capability

Interest in low flow anesthesia has increased in the past several years due to its economic and environmental benefits. Flow rates of less than 3 liters/min are typically considered low flow, but there is no standard definition. Low flow anesthesia studies have clearly shown a significant reduction in the cost of volatile anesthetic agents especially in the use of expensive anesthetic agents running at high percentage concentrations. Although the scavenging of anesthetic agents represents a small percentage of pollution in the environment, low flow anesthesia techniques are also considered to assist in the elimination of pollutants.

Narkomed anesthesia systems have always had low flow anesthesia capabilities. Narkomeds have recently been enhanced to accommodate even lower flows or closed circuit anesthesia requirements. Closed circuit anesthesia means that the maintenance of a constant anesthetic state is accomplished by the addition of gases and vapors at the same rate that the patient's body redistributes or eliminates them.

The low flow gas circuit enhancement provides clinicians with the ability to deliver mixed fresh gas flow at lower flow rates. Minimum oxygen is always present when the Narkomed is turned ON. Nitrous Oxide is available at flow rates controlled by the clinician using the nitrous oxide flow control valve, up to a limit which ensures a non-hypoxic mixture in the fresh gas flow. All Narkomed Anesthesia Systems with ORCs can be upgraded to accommodate lower flows. Narkomeds manufactured since May, 1993 have ORCs, these include all Narkomed 2Cs, Narkomed 4s beginning with serial number 10922 and Narkomed 2Bs starting at serial number 13170. Please refer to Figure 1. Also, as part of the enhancement the All Gas Selector switch has been removed from 3 and 4 gas circuit Narkomed anesthesia machines. Please refer to Figure 2 for Oxygen fresh gas flow concentrations.

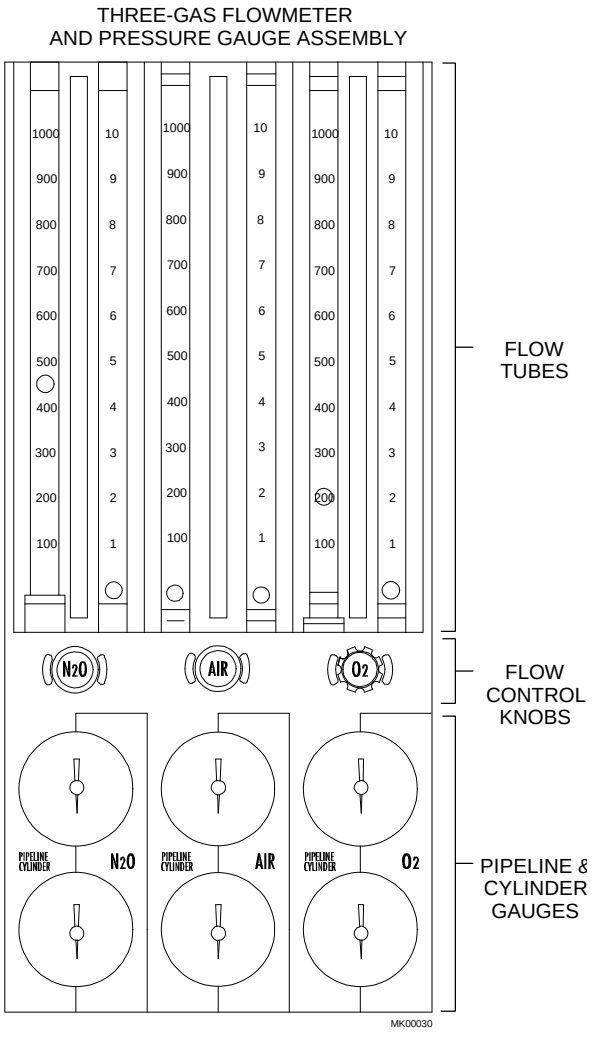

***Figure 1**: Narkomeds with ORCs will have the flow control knobs centered between the fine and course flow tubes as shown above.*

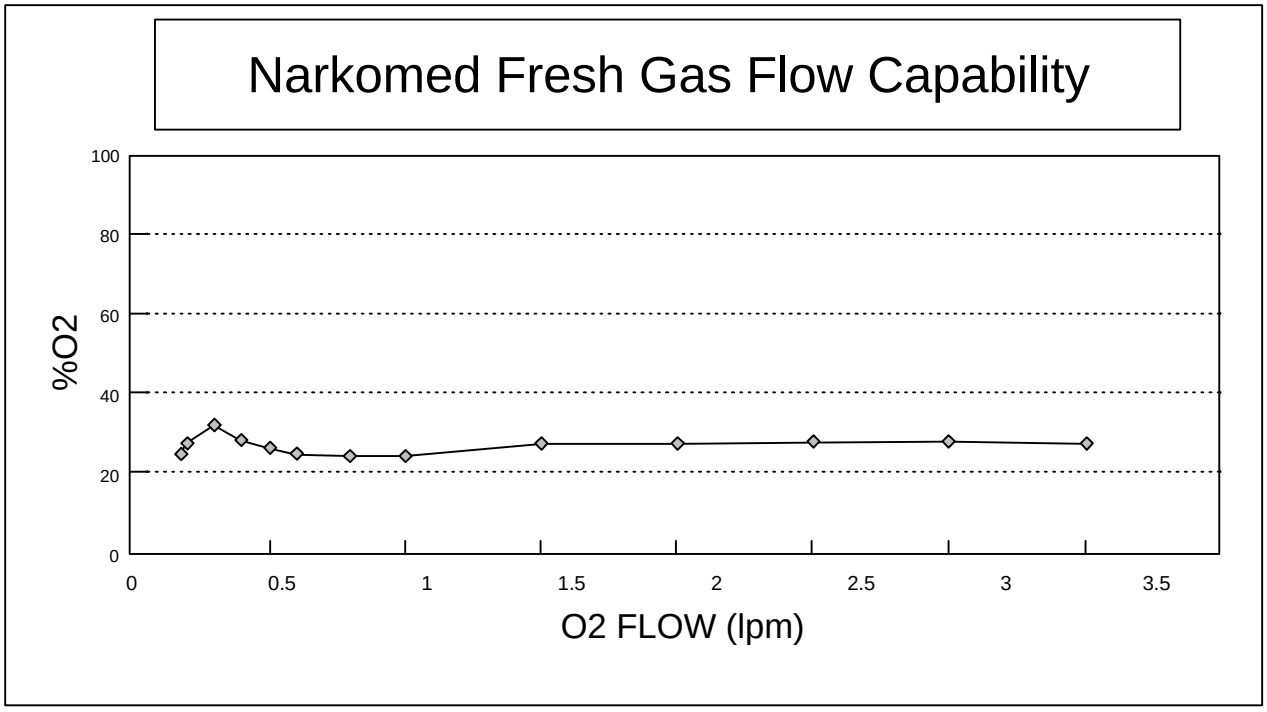

Figure 2

Performance Specifications

Minimum O2 flow*.....150-200 ml/min

Maximum N20 flow with
Minimum O2 flow*.....425-500 ml/min

Minimum %O2 at fresh gas outlet....25% nominal

* @ 50 psi inlet pressure

Product Description	***Product Number***	***List Price***
Low Flow Update Kit	4113496	$2,000

Note: Due to the tolerance of flow tube accuracy, the minimum option flow reading may vary from 100 to 200 ml/min.

If you have any questions regarding this Product Bulletin, please contact Nadine Opstbaum at ext. 2510.